L Number	Hits	Search Text	DB	Time stamp
10	31775	oxide near calcium	USPAT;	2002/07/08
			US-PGPUB;	11:59
			EPO; JPO;	
			DERWENT;	
			IBM_TDB	
11	1698	(oxide near calcium) and barrier	USPAT;	2002/07/08
			US-PGPUB:	11:59
			EPO; JPO;	11105
			DERWENT;	
			IBM_TDB	
12	208	((oxide near calcium) and barrier) and (dope	USPAT;	2002/07/08
		or doped or doping or dopant)	US-PGPUB;	12:00
		, , ,	EPO; JPO;	12:00
			DERWENT;	
			IBM_TDB	
13	140	(((oxide near calcium) and barrier) and (dope	_	0000/07/07
		or doped or doping or dopant)) and (copper	USPAT;	2002/07/08
		or cu)	US-PGPUB;	12:01
		,	EPO; JPO;	
			DERWENT;	
14	66	((((oxide near calcium) and barrier) and	IBM_TDB	
		(dope or doped or doping or dopant)) and	USPAT;	2002/07/08
		(copper or cu)) and semiconductor	US-PGPUB;	12:02
		(35Pps: 51 54)) and semiconductor	EPO; JPO;	
			DERWENT;	
15	7	(((((oxide near calcium) and barrier) and	IBM_TDB	
	-	(done or depend or denim or denim or denim	USPAT;	2002/07/08
		(dope or doped or doping or dopant)) and	US-PGPUB;	12:08
		(copper or cu)) and semiconductor) and	EPO; JPO;	
		(oxide near (dope or doping or dopant or	DERWENT;	
16	32	doped))	IBM_TDB	
	32	oxide near doped near (calcium or ca)	USPAT;	2002/07/08
			US-PGPUB;	12:15
			EPO; JPO;	
			DERWENT;	
17	4	WC2C40C0#	IBM_TDB	
'	4	"6261963"	USPAT;	2002/07/08
			US-PGPUB;	12:28
			EPO; JPO;	
			DERWENT;	
8	_	W00004	IBM_TDB	
•	5	"6226173"	USPAT;	2002/07/08
			US-PGPUB;	12:28
			EPO; JPO;	
			DERWENT;	
			IBM_TDB	

19	83	(US-6387806-\$ or US-6368967-\$ or	USPAT;	2002/07/08
		US-6384442-\$ or US-6387754-\$ or	US-PGPUB;	12:40
		US-6355555-\$ or US-6351036-\$ or	DERWENT	
		US-6352921-\$ or US-6309959-\$ or		
		US-6303486-\$ or US-6291876-\$ or		
		US-6291348-\$ or US-6278147-\$ or		
		US-6261963-\$ or US-6203613-\$ or		
		US-6188134-\$ or US-6211066-\$ or		
		US-6171953-\$ or US-6160315-\$ or		
		US-6144050-\$ or US-6117770-\$ or		
		US-6083818-\$ or US-6066892-\$ or		
		US-6077775-\$ or US-6057223-\$ or		
		US-6022808-\$ or US-6037257-\$).did. or		
		(US-5766379-\$ or US-6347049-\$ or		
		US-6329899-\$ or US-6168704-\$ or		
		US-5420612-\$ or US-5232900-\$ or		
		US-5361720-\$ or US-6270835-\$ or		
		US-6207522-\$ or US-4352716-\$ or		
		US-4396458-\$ or US-5985220-\$ or		
		US-4702963-\$ or US-6296942-\$ or		
		US-5546486-\$ or US-4165515-\$ or		
		US-5059583-\$ or US-5116812-\$ or		
		US-5470668-\$ or US-6136444-\$ or		
		US-3710205-\$ or US-6096648-\$ or		
		US-6080529-\$ or US-6194754-\$ or		
		US-4163736-\$ or US-3657784-\$ or		
		US-5298441-\$).did. or (US-3981073-\$ or		
		US-6284325-\$ or US-5031005-\$ or		
		US-5116774-\$ or US-5392306-\$ or		
		US-5118662-\$ or US-6319542-\$ or		
		US-6294835-\$ or US-6059940-\$ or		
		US-4968552-\$ or US-5622608-\$ or		
		US-5959358-\$ or US-6226173-\$).did. or		
		(US-20020076918-\$ or US-20020022335-\$ or		
		US-20020025417-\$ or US-20020025675-\$ or		
		US-20010035581-\$ or US-20010051420-\$ or		
		US-20010036753-\$ or US-20010040238-\$ or		
		US-20020085319-\$ or US-20020070404-\$ or		
		US-20010050531-\$ or		
		US-20010024868-\$).did. or (WO-9402664-\$ or		
		US-5232900-\$ or JP-11040891-\$ or		
		EP-132924-\$ or JP-09167855-\$).did.		

20	0	((US-6387806-\$ or US-6368967-\$ or	USPAT;	2002/07/08
	_	US-6384442-\$ or US-6387754-\$ or	US-PGPUB:	12:42
		US-6355555-\$ or US-6351036-\$ or	EPO; JPO;	
		US-6352921-\$ or US-6309959-\$ or	DERWENT;	
		US-6303486-\$ or US-6291876-\$ or	IBM TDB	
		US-6291348-\$ or US-6278147-\$ or		
		US-6261963-\$ or US-6203613-\$ or	:	
		US-6188134-\$ or US-6211066-\$ or		
		US-6171953-\$ or US-6160315-\$ or		
		US-6144050-\$ or US-6117770-\$ or		
		US-6083818-\$ or US-6066892-\$ or		
		US-6077775-\$ or US-6057223-\$ or		
		US-6022808-\$ or US-6037257-\$).did. or		
		(US-5766379-\$ or US-6347049-\$ or		
		US-6329899-\$ or US-6168704-\$ or		
		US-5420612-\$ or US-5232900-\$ or		
		US-5361720-\$ or US-6270835-\$ or		
		US-6207522-\$ or US-4352716-\$ or		
		US-4396458-\$ or US-5985220-\$ or		
		US-4702963-\$ or US-6296942-\$ or		
		US-5546486-\$ or US-4165515-\$ or		
		US-5059583-\$ or US-5116812-\$ or		
		US-5470668-\$ or US-6136444-\$ or		
		US-3710205-\$ or US-6096648-\$ or		
		US-6080529-\$ or US-6194754-\$ or		
		US-4163736-\$ or US-3657784-\$ or		
		US-5298441-\$).did. or (US-3981073-\$ or		
		US-6284325-\$ or US-5031005-\$ or		
		·		
		US-5116774-\$ or US-5392306-\$ or		
		US-5118662-\$ or US-6319542-\$ or		
		US-6294835-\$ or US-6059940-\$ or		
		US-4968552-\$ or US-5622608-\$ or		
		US-5959358-\$ or US-6226173-\$).did. or		
		(US-20020076918-\$ or US-20020022335-\$ or		
		US-20020025417-\$ or US-20020025675-\$ or		
		US-20010035581-\$ or US-20010051420-\$ or		
		US-20010036753-\$ or US-20010040238-\$ or		
		US-20020085319-\$ or US-20020070404-\$ or		
		US-20010050531-\$ or		
		US-20010024868-\$).did. or (WO-9402664-\$ or		
		US-5232900-\$ or JP-11040891-\$ or		
		EP-132924-\$ or JP-09167855-\$).did.) and		
		("barrier layer" near (anneal or annealed or annealing))		
21	98	("barrier layer" near (anneal or annealed or	USPAT;	2002/07/08
		annealing))	US-PGPUB;	12:52
			EPO; JPO;	
			DERWENT;	
			IBM_TDB	
22	7	(("barrier layer" near (anneal or annealed or	USPAT;	2002/07/08
		annealing))) and ibm	US-PGPUB;	12:54
		-	EPO; JPO;	
			DERWENT;	
			IBM_TDB	

23	14	((US-6387806-\$ or US-6368967-\$ or	USPAT;	2002/07/08
		US-6384442-\$ or US-6387754-\$ or	US-PGPUB;	12:56
		US-6355555-\$ or US-6351036-\$ or	EPO; JPO;	
		US-6352921-\$ or US-6309959-\$ or	DERWENT;	
	ŀ	US-6303486-\$ or US-6291876-\$ or	IBM_TDB	
		US-6291348-\$ or US-6278147-\$ or	_	
		US-6261963-\$ or US-6203613-\$ or		
		US-6188134-\$ or US-6211066-\$ or		
		US-6171953-\$ or US-6160315-\$ or		
		US-6144050-\$ or US-6117770-\$ or		
		US-6083818-\$ or US-6066892-\$ or		
		US-6077775-\$ or US-6057223-\$ or		
		US-6022808-\$ or US-6037257-\$).did. or		
		(US-5766379-\$ or US-6347049-\$ or		
		US-6329899-\$ or US-6168704-\$ or		
		US-5420612-\$ or US-5232900-\$ or		
		US-5361720-\$ or US-6270835-\$ or		
		US-6207522-\$ or US-4352716-\$ or		
		US-4396458-\$ or US-5985220-\$ or		
		US-4702963-\$ or US-6296942-\$ or		
		US-5546486-\$ or US-4165515-\$ or		
		US-5059583-\$ or US-5116812-\$ or		
		US-5470668-\$ or US-6136444-\$ or		
		US-3710205-\$ or US-6096648-\$ or		
		US-6080529-\$ or US-6194754-\$ or		
		US-4163736-\$ or US-3657784-\$ or		
		US-5298441-\$).did. or (US-3981073-\$ or		
		US-6284325-\$ or US-5031005-\$ or		
		US-5116774-\$ or US-5392306-\$ or		
		US-5118662-\$ or US-6319542-\$ or US-6294835-\$ or US-6059940-\$ or		
		US-4968552-\$ or US-5622608-\$ or		
		US-5959358-\$ or US-6226173-\$).did. or		
		(US-20020076918-\$ or US-20020022335-\$ or		
		US-20020025417-\$ or US-20020025675-\$ or		
		US-20010035581-\$ or US-20010051420-\$ or		
		US-20010036753-\$ or US-20010040238-\$ or		
		US-20020085319-\$ or US-20020070404-\$ or		
		US-20010050531-\$ or		
		US-20010024868-\$).did. or (WO-9402664-\$ or		
		US-5232900-\$ or JP-11040891-\$ or		
		EP-132924-\$ or JP-09167855-\$).did.) and ibm		
•	0	("(copper near (interconnect or	USPAT;	2002/07/05
		interconnection)) and barrier and (dielectric	US-PGPUB;	12:31
		or insulating) and (layer or film) and divalent	EPO; JPO;	
		and ion and (dopant or doped or doping or	DERWENT;	
		dope)").PN.	IBM_TDB	
-	1	(copper near (interconnect or	USPAT;	2002/07/05
		interconnection)) and barrier and (dielectric	US-PGPUB;	12:41
		or insulating) and (layer or film) and divalent	EPO; JPO;	
		and ion and (dopant or doped or doping or	DERWENT;	
		dope)	IBM_TDB	

•	71	(copper near (interconnect or	USPAT;	2002/07/05
		interconnection)) and barrier and (dielectric	US-PGPUB;	12:43
		or insulating) and (layer or film) and	EPO; JPO;	
		(beryllium or magnesium or calcium or	DERWENT;	
		strontium or barium) and (dopant or doped or doping or dope)	IBM_TDB	
-	67	((copper near (interconnect or	USPAT;	2002/07/05
		interconnection)) and barrier and (dielectric	US-PGPUB;	12:43
		or insulating) and (layer or film) and	EPO; JPO;	
		(beryllium or magnesium or calcium or	DERWENT;	
		strontium or barium) and (dopant or doped	IBM_TDB	
		or doping or dope)) and ("barrier layer" or		
		"barrier film")		
•	60	(((copper near (interconnect or	USPAT;	2002/07/05
		interconnection)) and barrier and (dielectric	US-PGPUB;	12:46
		or insulating) and (layer or film) and	EPO; JPO;	
		(beryllium or magnesium or calcium or	DERWENT;	
		strontium or barium) and (dopant or doped	IBM_TDB	
		or doping or dope)) and ("barrier layer" or		
		"barrier film")) and ("dielectric layer" or		
		"dielectric film" or "insulating layer" or		
		"insulating film")	USPAT;	2002/07/05
•	0	((((copper near (interconnect or interconnection)) and barrier and (dielectric	US-PGPUB;	12:52
		or insulating) and (layer or film) and	EPO; JPO;	12.02
		(beryllium or magnesium or calcium or	DERWENT;	
		strontium or barium) and (dopant or doped	IBM_TDB	
		or doping or dope)) and ("barrier layer" or	, 	
		"barrier film")) and ("dielectric layer" or		
		"dielectric film" or "insulating layer" or		
		"insulating film")) and (oxide near10 barrier		
		near10 (beryllium or magnesium or calcium		
		or strontium or barium))		
•	426	oxide near10 barrier near10 (beryllium or	USPAT;	2002/07/05
		magnesium or calcium or strontium or	US-PGPUB;	13:04
		barium)	EPO; JPO;	
			DERWENT;	
			IBM_TDB	
-	204	(oxide near10 barrier near10 (beryllium or	USPAT;	2002/07/05
		magnesium or calcium or strontium or	US-PGPUB;	13:06
		barium)) and "barrier layer"	EPO; JPO;	
			DERWENT;	
			IBM_TDB	2002/07/05
-	101	((oxide near10 barrier near10 (beryllium or	USPAT;	2002/07/05
		magnesium or calcium or strontium or	US-PGPUB;	13:06
		barium)) and "barrier layer") and (copper or	EPO; JPO; DERWENT;	
		cu)	IBM_TDB	
		///avida page40 harrier page40 /ham/lium ar		2002/07/05
	54	(((oxide near10 barrier near10 (beryllium or magnesium or calcium or strontium or	USPAT; US-PGPUB;	13:06
-	1	mannesum or calcium or strontium of	UUTUUU;	1 3.00
•			1	
-		barium)) and "barrier layer") and (copper or cu)) and (dielectric or insulating) and (layer	EPO; JPO; DERWENT;	

•	512	oxide near10 barrier near10 (beryllium or	USPAT;	2002/07/05
		magnesium or calcium or strontium or	US-PGPUB;	13:37
		barium or Be or Mg or Ca or St or Ba)	EPO; JPO;	
			DERWENT;	
			IBM_TDB	
-	256	(oxide near10 barrier near10 (beryllium or	USPAT;	2002/07/05
		magnesium or calcium or strontium or	US-PGPUB;	13:06
		barium or Be or Mg or Ca or St or Ba)) and	EPO; JPO;	
		"barrier layer"	DERWENT;	
		_	IBM_TDB	
•	137	((oxide near10 barrier near10 (beryllium or	USPAT;	2002/07/05
		magnesium or calcium or strontium or	US-PGPUB;	13:06
		barium or Be or Mg or Ca or St or Ba)) and	EPO; JPO;	13:06
		"barrier layer") and (copper or cu)	1	
		and (copper of cu)	DERWENT;	
ı	66	(((oxide near10 barrier near10 (beryllium or	IBM_TDB	
		magnesium or calcium or strontium or	USPAT;	2002/07/05
			US-PGPUB;	13:07
		barium or Be or Mg or Ca or St or Ba)) and	EPO; JPO;	
		"barrier layer") and (copper or cu)) and	DERWENT;	
	1	(dielectric or insulating) and (layer or film)	IBM_TDB	
	•	((((oxide near10 barrier near10 (beryllium or	USPAT;	2002/07/05
		magnesium or calcium or strontium or	US-PGPUB;	13:08
		barium or Be or Mg or Ca or St or Ba)) and	EPO; JPO;	
		"barrier layer") and (copper or cu)) and	DERWENT;	
		(dielectric or insulating) and (layer or film))	IBM_TDB	
		and ("copper interconnect" or "cu		
		interconnect" or "copper interconnection"		
		or "cu interconnection")		
	0	(((((oxide near10 barrier near10 (beryllium or	USPAT;	2002/07/05
	1	magnesium or calcium or strontium or	US-PGPUB;	13:38
		barium or Be or Mg or Ca or St or Ba)) and	EPO; JPO;	
		"barrier layer") and (copper or cu)) and	DERWENT;	
		(dielectric or insulating) and (layer or film))	IBM_TDB	
		and ("copper interconnect" or "cu	10141_100	
		interconnect" or "copper interconnection"		
		or "cu interconnection")) and (oxide near		
		barrier near (beryllium or magnesium or		
		calcium or strontium or barium or Be or Mg		
		or Ca or St or Ba))		
	1	**		
	-	((((oxide near10 barrier near10 (beryllium or	USPAT;	2002/07/05
		magnesium or calcium or strontium or	US-PGPUB;	13:39
		barium or Be or Mg or Ca or St or Ba)) and	EPO; JPO;	
		"barrier layer") and (copper or cu)) and	DERWENT;	
		(dielectric or insulating) and (layer or film))	IBM_TDB	
		and ("copper interconnect" or "cu		
		interconnect" or "copper interconnection"		
		or "cu interconnection")) and (oxide near5		
	i	barrier near5 (beryllium or magnesium or		
		calcium or strontium or barium or Be or Mg		
		or Ca or St or Ba))		

	1			1
	4	((((oxide near10 barrier near10 (beryllium or magnesium or calcium or strontium or barium or Be or Mg or Ca or St or Ba)) and "barrier layer") and (copper or cu)) and (dielectric or insulating) and (layer or film)) and (oxide near barrier near (beryllium or magnesium or calcium or strontium or barium or Be or Mg or Ca or St or Ba))	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/07/05 13:49
-	2336	"divalent ion"	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/07/05 13:51
•	17	"divalent ion" and "barrier layer"	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/07/05 13:52
-	2	("divalent ion" and "barrier layer") and ("barrier layer" near10 "divalent ion")	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/07/05 13:54
-	8	("barrier layer" near oxide near (beryllium or magnesium or calcium or strontium or barium or be or mg or ca or st or ba))	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/07/05 13:56
-	29	("barrier layer" near2 oxide near2 (beryllium or magnesium or calcium or strontium or barium or be or mg or ca or st or ba))	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/07/05 13:59
-	52	("barrier layer" near3 oxide near3 (beryllium or magnesium or calcium or strontium or barium or be or mg or ca or st or ba))	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/07/05 14:02
-	75	("barrier layer" near4 oxide near4 (beryllium or magnesium or calcium or strontium or barium or be or mg or ca or st or ba))	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/07/05 14:03
•	102	"copper interconnect structure" and "barrier layer"	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/07/05 14:04
-	67	("copper interconnect structure" and "barrier layer") and (magnesium or mg or beryllium or be or calcium or ca or strontium or st or barium or ba)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/07/05 14:05

-	11	("copper interconnect structure" and	USPAT;	2002/07/05
		"barrier layer") and (barrier near10	US-PGPUB;	14:09
		(magnesium or mg or beryllium or be or	EPO; JPO;	
		calcium or ca or strontium or st or barium or	DERWENT;	
		ba))	IBM_TDB	
-	0	"silicon oxide layer doped with"	USPAT;	2002/07/05
			US-PGPUB;	14:10
İ			EPO; JPO;	
			DERWENT;	
			IBM_TDB	
-	258	"silicon oxide layer" near doped	USPAT;	2002/07/05
			US-PGPUB;	14:12
			EPO; JPO;	
			DERWENT;	
			IBM_TDB	
-	56	"silicon oxide layer" adj doped	USPAT;	2002/07/05
			US-PGPUB;	14:12
			EPO; JPO;	
			DERWENT;	
		/llatification and it. It. It. It. It. It.	IBM_TDB	
•	1	("silicon oxide layer" adj doped) near10	USPAT;	2002/07/05
		(beryllium or magnesium or calcium or	US-PGPUB;	14:14
		strontium or barium or be or mg or ca or st or ba)	EPO; JPO;	
		or baj	DERWENT;	
_	1	("silicon oxide layer" adj doped) near20	IBM_TDB	0000/07/05
	•	(beryllium or magnesium or calcium or	USPAT; US-PGPUB;	2002/07/05 14:16
		strontium or barium or be or mg or ca or st	EPO; JPO;	14:10
		or ba)	DERWENT;	
		,	IBM_TDB	
-	5	("silicon oxide" adj doped) near20 (beryllium	USPAT;	2002/07/05
		or magnesium or calcium or strontium or	US-PGPUB;	14:17
		barium or be or mg or ca or st or ba)	EPO; JPO;	
		,	DERWENT;	
			IBM_TDB	
-	6	("silicon oxide" near doped) near20	USPAT;	2002/07/05
		(beryllium or magnesium or calcium or	US-PGPUB;	14:19
		strontium or barium or be or mg or ca or st	EPO; JPO;	
		or ba)	DERWENT;	
			IBM_TDB	
-	23	("silicon oxide" near5 doped) near20	USPAT;	2002/07/05
		(beryllium or magnesium or calcium or	US-PGPUB;	14:21
		strontium or barium or be or mg or ca or st	EPO; JPO;	
		or ba)	DERWENT;	
			IBM_TDB	
-	1045	("oxide" near5 doped) near20 (beryllium or	USPAT;	2002/07/05
		magnesium or calcium or strontium or	US-PGPUB;	14:21
		barium or be or mg or ca or st or ba)	EPO; JPO;	
			DERWENT;	
			IBM_TDB	

-	307	("oxide" near doped) near20 (beryllium or	USPAT;	2002/07/05
		magnesium or calcium or strontium or	US-PGPUB;	14:22
		barium or be or mg or ca or st or ba)	EPO; JPO;	14.22
		barram of be of mg of ea of st of bay	DERWENT;	
			•	
_	234	("oxide" near doped) near10 (beryllium or	IBM_TDB	0000/07/07
_	254		USPAT;	2002/07/05
		magnesium or calcium or strontium or	US-PGPUB;	14:22
		barium or be or mg or ca or st or ba)	EPO; JPO;	
			DERWENT;	
		//n	IBM_TDB	
-	85	(("oxide" near doped) near10 (beryllium or	USPAT;	2002/07/05
		magnesium or calcium or strontium or	US-PGPUB;	14:23
		barium or be or mg or ca or st or ba)) and	EPO; JPO;	
		(copper or cu)	DERWENT;	
			IBM_TDB	
-	7	((("oxide" near doped) near10 (beryllium or	USPAT;	2002/07/05
		magnesium or calcium or strontium or	US-PGPUB;	14:23
		barium or be or mg or ca or st or ba)) and	EPO; JPO;	
		(copper or cu)) and barrier	DERWENT;	
		(seppos of only and adminor	IBM_TDB	
-	235	("copper interconnect" or "copper	USPAT;	2002/07/05
		interconnection" or "cu interconnect" or "cu	US-PGPUB;	14:26
		interconnection") and ("barrier layer" or	EPO; JPO;	14:20
		"barrier film") and (dope or dopant or doping		
			DERWENT;	
		or doped) and (copper or cu) and (beryllium	IBM_TDB	
		or magnesium or calcium or strontium or		
	47	barium or be or mg or ca or st or ba)		
-	17	(("copper interconnect" or "copper	USPAT;	2002/07/05
		interconnection" or "cu interconnect" or "cu	US-PGPUB;	14:33
		interconnection") and ("barrier layer" or	EPO; JPO;	
		"barrier film") and (dope or dopant or doping	DERWENT;	
		or doped) and (copper or cu) and (beryllium	IBM_TDB	
		or magnesium or calcium or strontium or		
	ĺ	barium or be or mg or ca or st or ba)) and		
		("second barrier layer" or "second barrier		
		film")		
-	211	("second barrier layer" or "second barrier	USPAT;	2002/07/05
		film") near (comprised or formed or	US-PGPUB;	14:36
		includes)	EPO; JPO;	
			DERWENT;	
			IBM_TDB	
-	7	(("second barrier layer" or "second barrier	USPAT;	2002/07/05
		film") near (comprised or formed or	US-PGPUB;	14:38
		includes)) and (("second barrier layer" or	EPO; JPO;	
	}	"second barrier film") near (comprised or	DERWENT;	
		formed or includes)).ti,clms.	IBM_TDB	
_	7	(("second barrier layer" or "second barrier	USPAT;	2002/07/05
	•	film") near (comprised or comprising or	'	
	İ	formed or includes)).ti,clms.	US-PGPUB;	14:40
		ionica of includes/j.u,cims.	EPO; JPO;	
			DERWENT;	
			IBM_TDB	

		//8	T	T
-	8	(("second barrier layer" or "second barrier	USPAT;	2002/07/05
		film") near5 (comprised or comprising or	US-PGPUB;	14:41
		formed or includes)).ti,clms.	EPO; JPO;	
			DERWENT;	
	4200	//91	IBM_TDB	
-	1323	(("barrier layer" or "barrier film") near5	USPAT;	2002/07/05
		(comprised or comprising or formed or	US-PGPUB;	14:43
		includes)).ti,clms.	EPO; JPO;	
			DERWENT;	
			IBM_TDB	
-	621	(("barrier layer" or "barrier film") near	USPAT;	2002/07/05
i		(comprised or comprising or formed or	US-PGPUB;	14:44
		includes)).ti,clms.	EPO; JPO;	
			DERWENT;	
			IBM_TDB	
-	17	((("barrier layer" or "barrier film") near	USPAT;	2002/07/05
		(comprised or comprising or formed or	US-PGPUB;	14:46
		includes)).ti,clms.) and (copper or cu) and	EPO; JPO;	
		(beryllium or magnesium or calcium or	DERWENT;	
		strontium or barium or be or mg or ca or st	IBM_TDB	
		or ba)		
-	1	6207522.URPN.	USPAT	2002/07/05
				14:50
-	18	("3481781" "4277525" "4501602"	USPAT	2002/07/05
		"4645524" "5043002" "5079069"		14:51
		"5152819" "5154744" "5155655"		
		"5161086" "5261153" "5347258"		
		"5356672" "5410107" "5454847"		
		"5466892" "5652021" "5670262").PN.		
-	61	4702963.URPN.	USPAT	2002/07/05
				14:51
-	1	6136444.URPN.	USPAT	2002/07/05
				14:52
-	2	"copper interconnect structure" and	USPAT;	2002/07/05
		("barrier layer" or "barrier film") and (copper	US-PGPUB;	14:55
		or cu) and (beryllium or magnesium or	EPO; JPO;	
		calcium or strontium or barium)	DERWENT;	
		·	IBM_TDB	
-	2	"copper interconnect structure" and	USPAT;	2002/07/05
		("barrier layer" or "barrier film") and	US-PGPUB;	14:57
		(beryllium or magnesium or calcium or	EPO; JPO;	
		strontium or barium)	DERWENT;	
	i	·	IBM_TDB	
-	95	"copper interconnect" and ("barrier layer" or	USPAT;	2002/07/05
		"barrier film") and (beryllium or magnesium	US-PGPUB;	14:59
		or calcium or strontium or barium)	EPO; JPO;	•
		·	DERWENT;	
			IBM_TDB	
-	88	("copper interconnect" and ("barrier layer"	USPAT;	2002/07/05
		or "barrier film") and (beryllium or	US-PGPUB;	15:02
		magnesium or calcium or strontium or	EPO; JPO;	
	1		· ·	
		barium)) and (dielectric or insulating)	DERWENT;	

-	6	(("copper interconnect" and ("barrier layer"	USPAT;	2002/07/05
		or "barrier film") and (beryllium or	US-PGPUB;	15:03
		magnesium or calcium or strontium or	EPO; JPO;	
		barium)) and (dielectric or insulating)) and	DERWENT;	
		(beryllium or be)	IBM_TDB	
-	52	(("copper interconnect" and ("barrier layer"	USPAT;	2002/07/05
		or "barrier film") and (beryllium or	US-PGPUB;	15:04
		magnesium or calcium or strontium or	EPO; JPO;	
		barium)) and (dielectric or insulating)) and	DERWENT;	
		(magnesium or mg)	IBM_TDB	
•	0	(("copper interconnect" and ("barrier layer"	USPAT;	2002/07/05
		or "barrier film") and (beryllium or	US-PGPUB;	15:04
		magnesium or calcium or strontium or	EPO; JPO;	
		barium)) and (dielectric or insulating)) and	DERWENT;	
		((doped or dopant or doping or dope) near	IBM_TDB	
		(magnesium or mg))	_	
_	7	(("copper interconnect" and ("barrier layer"	USPAT;	2002/07/05
		or "barrier film") and (beryllium or	US-PGPUB;	15:06
		magnesium or calcium or strontium or	EPO; JPO;	
		barium)) and (dielectric or insulating)) and	DERWENT;	
		((doped or dopant or doping or dope) near5	IBM TDB	
		(magnesium or mg))	15155	
	19	(("copper interconnect" and ("barrier layer"	USPAT;	2002/07/05
		or "barrier film") and (beryllium or	US-PGPUB;	15:07
		magnesium or calcium or strontium or	EPO; JPO;	13.07
	+	barium)) and (dielectric or insulating)) and	DERWENT;	
		((barrier layer) near5 (magnesium or mg))	IBM_TDB	
_	21	(("copper interconnect" and ("barrier layer"	USPAT;	2002/07/05
_		or "barrier film") and (beryllium or	US-PGPUB;	15:07
		magnesium or calcium or strontium or	EPO; JPO;	15:07
		barium)) and (dielectric or insulating)) and	DERWENT;	
			,	
		((barrier layer) near (magnesium or mg))	IBM_TDB	0000107107
-	1	(("copper interconnect" and ("barrier layer"	USPAT;	2002/07/05
		or "barrier film") and (beryllium or	US-PGPUB;	15:09
		magnesium or calcium or strontium or	EPO; JPO;	
		barium)) and (dielectric or insulating)) and	DERWENT;	
		(("barrier layer") near (magnesium or mg))	IBM_TDB	0000/07/07
-	2	6261963.URPN.	USPAT	2002/07/05
				15:09
•	34	(("barrier layer") near (magnesium or mg))	USPAT;	2002/07/05
			US-PGPUB;	15:14
			EPO; JPO;	
			DERWENT;	
			IBM_TDB	
•	5	(("barrier layer") near (beryllium or be))	USPAT;	2002/07/05
			US-PGPUB;	15:16
			EPO; JPO;	
			DERWENT;	
			IBM_TDB	
-	8	(("barrier layer") near (calcium or ca))	USPAT;	2002/07/05
			US-PGPUB;	15:18
			EPO; JPO;	
			DERWENT;	
			IBM_TDB	

	- 1		·	
-	4	(("barrier layer") near (strontium))	USPAT;	2002/07/05
			US-PGPUB;	15:18
			EPO; JPO;	
			DERWENT;	
			IBM_TDB	
-	13	(("barrier layer") near (barium))	USPAT;	2002/07/05
			US-PGPUB;	15:20
			EPO; JPO;	
			DERWENT;	
			IBM_TDB	
-	20	(("barrier layer") near5 (beryllium))	USPAT;	2002/07/05
			US-PGPUB;	15:23
			EPO; JPO;	
			DERWENT;	
			IBM_TDB	
-	98	(("barrier layer") near5 (magnesium))	USPAT;	2002/07/05
			US-PGPUB;	15:23
			EPO; JPO;	.0.20
			DERWENT;	
			IBM_TDB	
_	52	((("barrier layer") near5 (magnesium))) near5	USPAT;	2002/07/05
	J	(oxide or doped or dopant or doping or dope)		
		(oxide or doped or dopant or doping or dope)	US-PGPUB;	15:26
			EPO; JPO;	
			DERWENT;	
	42		IBM_TDB	
-	13	(((("barrier layer") near5 (magnesium)))	USPAT;	2002/07/05
		near5 (oxide or doped or dopant or doping or	US-PGPUB;	15:28
		dope)) and copper	EPO; JPO;	
			DERWENT;	
			IBM_TDB	
-	69	("barrier layer" or "barrier film") and	USPAT;	2002/07/05
		("silicon oxide" or "silicon dioxide") and	US-PGPUB;	15:34
		((doped or doping or dope or dopant) near	EPO; JPO;	
		(beryllium or magnesium or calcium or	DERWENT;	
		strontium or barium))	IBM_TDB	
-	31	(("barrier layer" or "barrier film") and	USPAT;	2002/07/05
		("silicon oxide" or "silicon dioxide") and	US-PGPUB;	15:31
		((doped or doping or dope or dopant) near	EPO; JPO;	
		(beryllium or magnesium or calcium or	DERWENT;	
		strontium or barium))) and copper	IBM_TDB	
-	3	("barrier layer" or "barrier film") and	USPAT;	2002/07/05
		("silicon oxide" or "silicon dioxide") and	US-PGPUB;	15:36
		(((doped or doping or dope or dopant) near	EPO; JPO;	
		(beryllium or magnesium or calcium or	DERWENT;	
		strontium or barium)) same "barrier layer")	IBM_TDB	
		and copper		
-	365	((beryllium or magnesium or calcium or	USPAT;	2002/07/05
		strontium or barium) same "barrier layer")	US-PGPUB;	15:37
		and copper	EPO; JPO;	10101
			DERWENT;	
			IBM_TDB	
	L		IDINI_IDD	

-	17	((beryllium or magnesium or calcium or	USPAT;	2002/07/05
		strontium or barium) near "barrier layer") and copper	US-PGPUB; EPO; JPO;	15:40
			DERWENT; IBM TDB	
_	87	((beryllium or magnesium or calcium or	USPAT;	2002/07/05
		strontium or barium) near5 "barrier layer")	US-PGPUB;	15:42
		and copper	EPO; JPO;	
			DERWENT;	
			IBM_TDB	
-	36	((beryllium or magnesium or calcium or	USPAT;	2002/07/05
		strontium or barium) near5 "barrier layer"	US-PGPUB;	15:47
		near5 oxide) and copper	EPO; JPO;	
			DERWENT;	
			IBM_TDB	
-	20	(("copper interconnect" or "copper	USPAT;	2002/07/05
		interconnection") and ("barrier layer" or	US-PGPUB;	15:50
		"barrier film" or "buffer layer" or "buffer	EPO; JPO;	
		film")).ti,clms.	DERWENT;	
	81	(("copper interconnect" or "copper	IBM_TDB USPAT;	2002/07/05
-	01	interconnection") and ("barrier layer" or	US-PGPUB;	15:52
		"barrier film" or "buffer layer" or "buffer	EPO; JPO;	13.32
		film")) and ("insulating layer" or "dielectric	DERWENT;	
		layer" or "insulating film" or "dielectric	IBM_TDB	
		film") and (beryllium or magnesium or		
		calcium or strontium or barium) and (dioxide		
		or oxide)		
-	3	((("copper interconnect" or "copper	USPAT;	2002/07/05
		interconnection") and ("barrier layer" or	US-PGPUB;	15:53
		"barrier film" or "buffer layer" or "buffer	EPO; JPO;	
		film")) and ("insulating layer" or "dielectric	DERWENT;	
		layer" or "insulating film" or "dielectric	IBM_TDB	
		film") and (beryllium or magnesium or		
		calcium or strontium or barium) and (dioxide		
		or oxide)) and beryllium		
-	45	((("copper interconnect" or "copper	USPAT;	2002/07/05
		interconnection") and ("barrier layer" or	US-PGPUB;	16:01
		"barrier film" or "buffer layer" or "buffer	EPO; JPO;	
		film")) and ("insulating layer" or "dielectric	DERWENT;	
		layer" or "insulating film" or "dielectric	IBM_TDB	
		film") and (beryllium or magnesium or		
		calcium or strontium or barium) and (dioxide or oxide)) and magnesium		
	14	((("copper interconnect" or "copper	USPAT;	2002/07/05
_	"	interconnection") and ("barrier layer" or	US-PGPUB;	16:03
		"barrier film" or "buffer layer" or "buffer	EPO; JPO;	
		film")) and ("insulating layer" or "dielectric	DERWENT;	
		layer" or "insulating film" or "dielectric	IBM_TDB	
		film") and (beryllium or magnesium or	_	
		calcium or strontium or barium) and (dioxide		
		or oxide)) and calcium		

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•	33	((("copper interconnect" or "copper interconnection") and ("barrier layer" or "barrier film" or "buffer layer" or "buffer film")) and ("insulating layer" or "dielectric	USPAT; US-PGPUB; EPO; JPO; DERWENT;	2002/07/05 16:09
		layer" or "insulating film" or "dielectric film") and (beryllium or magnesium or calcium or strontium or barium) and (dioxide or oxide)) and strontium	IBM_TDB	
-	33	((("copper interconnect" or "copper interconnection") and ("barrier layer" or "barrier film" or "buffer layer" or "buffer film")) and ("insulating layer" or "dielectric layer" or "insulating film" or "dielectric film") and (beryllium or magnesium or calcium or strontium or barium) and (dioxide	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/07/05 16:12
-	6	or oxide)) and barium "barrier layer" near calcium	USPAT; US-PGPUB; EPO; JPO; DERWENT;	2002/07/05 16:18
-	6	("barrier layer" or "barrier film") near calcium	IBM_TDB USPAT; US-PGPUB; EPO; JPO; DERWENT;	2002/07/05 16:19
	10	("barrier layer" or "barrier film") near (calcium or ca)	IBM_TDB USPAT; US-PGPUB; EPO; JPO; DERWENT;	2002/07/05 16:31
-	75	("barrier layer" or "barrier film") near5 (calcium or ca)	IBM_TDB USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/07/05 16:32
-	1	(("barrier layer" or "barrier film") near5 (calcium or ca)) and copper and (interconnect or interconnection) and (dielectric or insulating)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/07/05 16:33
-	1	copper and (interconnect or interconnection) and (dielectric or insulating) and (barrier near5 calcium)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/07/05 16:37
-	3	copper and (interconnect or interconnection) and (dielectric or insulating) and (barrier near10 calcium)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/07/05 16:41

-	13	copper and (interconnect or	USPAT;	2002/07/05
		interconnection) and (dielectric or	US-PGPUB;	16:42
		insulating) and (barrier near5 magnesium)	EPO; JPO;	
			DERWENT;	
			IBM TDB	